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SHAFT SEALING DEVICE FOR VACUUM PUMP

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ABSTRACT

PURPOSE: To prevent the leakage of lubricating oil further positively by forming a main and an auxiliary lips at an oil seal for preventing lubricating oil, supplied to an oil-lubricated bearing for supporting a rotary shaft, from infiltrating into a vacuum pump, and supplying purge gas into a space between the lips to form a pressure wall.

CONSTITUTION: In a vacuum pump formed of a pair of mutually meshed male-female screw rotors and a casing, a rotary shaft 2 to which the rotors are fixed is supported by an oil-lubricated bearing 4, and bearing lubricating oil 5 is supplied to this bearing 4 through an oil supply hole provided in the rotary shaft 2. An oil seal 7 is provided between the rotary shaft 2 and a housing 20 so that the bearing lubricating oil does not infiltrate into the vacuum pump. This oil seal 7 is provided with a lip space 7c sealed by a main and an auxiliary lips 7a, 7b, and purge gas is led into this lip space 7c through a purge hole 22 and a communicating hole 7d. A pressure wall is thereby formed at the lip space 7c so as to prevent the lubricating oil 5 from leaking out onto the oil seal back face chamber 11 side.

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